

are also of great importance. These include other tropical diseases such as leishmaniasis<sup>8</sup>; autoimmune diseases, particularly rheumatoid arthritis<sup>9</sup>; some forms of cancer<sup>10</sup>; and pathogenic and opportunistic mycobacterial infections, especially in patients with AIDS.<sup>11</sup> Political and narrowly defined economic factors, rather than world health, seem to be the determining factors in the development of drugs, allowing orphan drugs and diseases to be glibly dismissed owing to failure of will by the world community.

The possibility of developing new compounds from thalidomide that are much more selectively active than the parent molecule has also not been exhausted.<sup>4</sup> I believe that it is necessary for all concerned with global health to press for such development.

M HOOPER

Tropical Diseases Chemotherapy Unit,  
Sunderland Polytechnic,  
Sunderland SR2 7EE

- 1 Malin AS, Waters MFR, Shehade SA, Roberts MM. Leprosy in reaction: a medical emergency. *BMJ* 1991;302:1324-6. (1 June.)
- 2 Crawford CL. Use of thalidomide in leprosy. *BMJ* 1991;302:1603-4.
- 3 Waters MFR. Use of thalidomide in leprosy. *BMJ* 1991;303:470. (24 August.)
- 4 Koch HP. Thalidomide and congeners as anti-inflammatory agents. In: Ellis GP, West GB, eds. *Progress in medicinal chemistry*. Amsterdam: Elsevier, 1985:166-242.
- 5 Canavan BC, Esmonde AG, Feely JFP, Quigley JM, Timoney RF. The influence of lipophilic and steric properties on the transport of N<sup>2</sup>-substituted phenazines to the spleen of mice following oral administration. *European Journal of Medicinal Chemistry* 1986;21:199-203.
- 6 O'Sullivan JF, Conalty ML, Morrison NE. Clofazimine analogues active against a clofazimine-resistant organism. *J Med Chem* 1988;31:569-72.
- 7 Franzblau SG, White EW, O'Sullivan JF. Structure-activity relationships of tetramethylpiperidine-substituted phenazines against *Mycobacterium leprae* in vitro. *Antimicrob Agents Chemother* 1989;33:2004-5.
- 8 Evans AT, Croft SL, Peters W, Neal RA. Antileishmanial effects of clofazimine and other antimycobacterial agents. *Ann Trop Med Parasitol* 1989;83:447-54.
- 9 Currey HLF, Fowler PD. A study of clofazimine in the rat. *Br J Pharmacol* 1972;45:676-81.
- 10 Futures of world science and technology. *Guardian* 1981 March 26.
- 11 Lindholm-Levy PJ, Heifets LB. Clofazimine and other rimino-compounds: minimal inhibitory and minimal bactericidal concentrations at different pHs for *Mycobacterium avium* complex. *Tubercle* 1988;69:179-86.

## Seafarers and HIV infection

SIR,—J Dhar and D J Timmins's conclusion that seafarers need to be the target of information on health and on preventing HIV infection<sup>1</sup> cannot be faulted, especially as globally seafarers acquire sexually transmitted diseases (mostly gonorrhoea) 5-20 times more frequently than the male population living on land.<sup>2</sup> But the reference to heterosexual contacts in Madagascar as "representing a long term pool of infection" is puzzling as published reports show a very low seroprevalence of HIV antibodies in that country. In a nationwide survey of more than 12 000 people in 1989 only five cases (0.04%) of HIV infection were detected (A J Rasamindrahoto et al, sixth international conference on AIDS, San Francisco, 1990).

DAVID W FITZSIMONS

Bureau of Hygiene and Tropical Diseases,  
London WC1E 7HT

- 1 Dhar J, Timmins DJ. Seafarers and HIV infection. *BMJ* 1991;303:1132-3. (2 November.)
- 2 Vuksanovic P, Low A. Venereal diseases and AIDS among seafarers. *Travel Medicine* 1991;9:121-3.

SIR,—J Dhar and D J Timmins were right to draw attention to the special problem of HIV infection in seafarers. They mentioned a study of 2600 Belgian seafarers, of whom 4.5% were HIV positive, but most of these seafarers were from the African continent, where HIV infection is rife.

The Department of Transport held seminars on

AIDS for the Merchant Navy at the Royal College of Physicians in London in 1989 and 1990 with strong support from the Department of Health, the Health Education Authority, and both sides of the shipping industry. British seafarers have been sent a range of pamphlets on the subject, and shipping companies have been urged to provide durable condoms for all crews. The Health Education Authority is funding a multilingual AIDS education package, including a video dedicated to seafarers. It is being developed by the British Red Cross and is currently being field tested and is expected to be launched early next year. The World Health Organisation and the International Labour Office are both showing interest in it, and I hope that, through their help, it will be distributed to all seafarers worldwide.

JOHN TAYLOR

Chief medical officer,  
Department of Transport,  
London SW1P 3EB

- 1 Dhar J, Timmins DJ. Seafarers and HIV infection. *BMJ* 1991;303:1132-3. (2 November.)

## Detention of British citizens as hostages in the Gulf

SIR,—J A Easton and S W Turner's article on the health, psychological, and family consequences of being a British hostage in the Gulf war was an insult to women. They report that one of the traumatic events suffered by the hostages was that "several men were forced to watch their wives being raped."<sup>1</sup> Of course the witnessing of such an event will have been traumatic, but how much greater the trauma for the women, yet their trauma goes unmentioned.

Society habitually sees events through male eyes, but such a partisan view fails us. Attitudes among doctors must be changed so that they will no longer tolerate material that treats women as inferior and, in this instance, as unfeeling chattels. The *BMJ* has a responsibility to help engineer such change. To ignore sexism is to collude with it, and that is no longer acceptable.

JOE COLLIER  
ROHAN COLLIER

Richmond,  
Surrey TW9 1PG

- 1 Easton JA, Turner SW. Detention of British citizens as hostages in the Gulf—health, psychological, and family consequences. *BMJ* 1991;303:1231-4. (16 November.)

## Animal experimentation

SIR,—As a member of executive of the Research for Health Charity Group I would like to respond to the singularly uninformed letter from Donal Crawford on animal experimentation.<sup>1</sup>

Fortunately most doctors know the history of penicillin: that the original observation was made by Fleming on a bacteriological culture plate is of course true,<sup>2</sup> but to try to pretend that this was all it took is part of the misinformation which is the animal rights activists' stock in trade and which the Research for Health Charity Group was formed to contest. Most people will know that the purification and development of penicillin for clinical use was carried out by Florey, Chain, and colleagues in Oxford. Animals were used extensively in this process—the protection penicillin gave to mice injected with streptococci is graphically described and this portion of the work was as important, if not more so, than the original observations.<sup>3</sup>

As for the effect of penicillin on guinea pigs, even with the impure preparations available in 1943 Hamre *et al* concluded that, "When treated with the same doses of penicillin per kg as that given to man, guinea pigs did not die" and, in fact,

showed no signs of toxicity.<sup>4</sup> Modern crystalline penicillins are even less toxic, showing a sixfold reduction even at these high doses. In fact, penicillin itself is not toxic to guinea pigs, although they have been shown to get a form of colitis similar to pseudomembranous colitis in humans; colitis in both humans and guinea pigs is due to disturbance of intestinal flora, a further indication of the relevance of animal models.

It is curious that the animal rights organisations have to resort to such misrepresentation to prove their point. Such tactics might work with the general public, which is why the medical profession should be aware of and attempt to refute them. In a second letter Vernon Coleman asserts that "animal experiments are so misleading as to be dangerous."<sup>5</sup> He must surely remember that a good deal of the physiology and pathophysiology he learnt is relevant to modern drug discovery, yet he continues to perpetuate the myth that animal experiments have done nothing to help us combat disease.<sup>6</sup> I am sure everyone reading this will immediately think of multiple exceptions to this sweeping generalisation.

It is worth looking at the question Coleman asked in his survey.<sup>4</sup> It was couched in such a way that most doctors would be obliged to agree. It is time that medical researchers set about telling the public what they are doing.

NICHOLAS A WRIGHT

Imperial Cancer Research Fund,  
London WC2A 3PX

- 1 Crawford D. Animal experimentation. *BMJ* 1991;303:1137. (2 November.)
- 2 Hare R. New light on the history of penicillin. *Medical History* 1982;26:1.
- 3 MacFarlane G, Florey H. *The making of a great scientist*. Oxford: Oxford University Press, 1979.
- 4 Hamre DM, Rake G, McKee CM, MacPhillany HB. The toxicity of penicillin as prepared for clinical use. *Am J Med Sci* 1943;206: 642.
- 5 Coleman V. Animal experimentation. *BMJ* 1991;303:1137. (2 November.)
- 6 Coleman V. Why animal experiments must stop. London: Greenprint, 1991:93.

## Exiled from the Dream Time

SIR,—I cannot agree with Patricia Morison that the debate about restitution of Aboriginal remains is complex.<sup>1</sup> As medical officer for the Victorian Aboriginal Health Service. I believe that the BMA should add its voice to that of those who are trying to persuade London's Natural History Museum and other institutions to return Aboriginal remains to Australia.

These human remains are often not from aeons past but are those of the relatives of some of my patients and their kin. The dead, and their places of burial, hold great spiritual significance for Aboriginal people, who are deeply disturbed by the knowledge that remains of their ancestors have been removed to Britain. Morison suggests that the fact that bodies were procured illegally is "a red herring" and that the possibility that they may be used for scientific research justifies their retention. Under British law, however, a claim to be making good use of stolen goods does not allow the receiver to keep them. None of the Aboriginal specimens in British institutions were obtained with the permission of the subjects or their relatives: at best they were removed from graves "uncovered by erosion or development," at worst they were obtained by murder.

The medical profession was concerned in the removal of these bodies and, I believe, has a duty to call for their return.

WENDY HOLMES

Victorian Aboriginal Health Service,  
Fitzroy, Victoria 3065,  
Australia

- 1 Morison P. Exiled from the dream time. *BMJ* 1991;303:1142-3. (2 November.)